Meta-analysis, reviews, Consensus documents, and Guidelines; there are numerous sources aiming at supporting clinicians to provide best practice

Jan Jakobsson

Abstract

Aim: To encourage the spread of evidenced based practice applicable to ambulatory surgery.

Methods: Review of recent guidelines and consensus papers supportive to safe and efficacious ambulatory surgery and anaesthesia.

Results and conclusion: There are today numerous guidelines, recommendations and consensus papers available that are helpful for implementation of evidenced based practice. Guidelines are not absolute but needs to adopted and implemented after review and analysis. They need to be maintained and updated when new information becomes available

Keywords: Guidelines; Day case; Ambulatory surgery.

Author's address: Jan Jakobsson MD, PhD Adjunct Professor, Anaesthesia & Intensive Care, Institution for Physiology & Pharmacology, Karolinska Institutet, Depart. Anaesthesia & Intensive Care Danderyds, University Hospital, Stockholm, Sweden

E-mail: Jan.jakobsson@ki.se

There is a growing interest in evidence based medicine, how to provide best practice. The field of medical science is growing and it is hard for the clinical practitioner to keep up with the continuous flow of information. Meta-analysis, consensus document and guidelines are all intended to provide a composite evaluation of available information, present state of the art. The development of such a document is a huge commitment. Still many such documents have been developed, although the process is time and resource consuming. The interest in providing standardised best practice is also increasing in anaesthesia, perioperative medicine.

There are today **guidelines around preoperative assessment**, the European Society of Anaesthesiology (ESA) published in the October 2011 issue of European Journal a 38 page document, *Preoperative evaluation of the adult patient undergoing non-cardiac surgery: guidelines from the European Society of Anaesthesiology* [1]. These are general recommendations and not explicitly devoted to the patient scheduled for ambulatory surgery. Still the document should be seen as a efficient review of evidence based medicine around preoperative assessment.

There is a 9 page **US consensus paper around perioperative blood glucose** management in diabetic patients undergoing ambulatory surgery published in Anesthesia and Analgesia December 2010; *Society for Ambulatory Anesthesia Consensus Statement on Perioperative Blood Glucose Management in Diabetic Patients Undergoing Ambulatory Surgery* [2] .

There are several documents around **preoperative fasting**. The most recent published being the ESA guidelines published in European Journal of Anaesthesiology August 2011; *Perioperative fasting in adults and children: guidelines from the European Society of Anaesthesiology* [3] .

This guideline is much in line with earlier recommendations but allows to add a "sip" of milk in the preop coffee or tea; *The key recommendations are that adults and children should be encouraged to drink clear fluids up to 2 h before elective surgery (including caesarean section) and all but one member of the guidelines group consider that tea or coffee with milk added (up to about one fifth of the total volume) are still clear fluids.*

The implementation of guidelines and evidence based recommendations is not always obvious. A survey in Germany published in July 2010 [4] showed that; *Patients reported mean fasting times of 10+/-5 h for fluids and 15+/-4 h for solid food, It concludes, Despite the apparent understanding of the benefits from reduced pre-operative fasting, full implementation of the guidelines remains poor in German anaesthesiology departments.*

Also in the US guidelines supporting avoidance of standard fasting over night has been published. Already in 1999, the American Society of Anesthesiologists adopted preoperative fasting guidelines to enhance the quality and efficiency of patient care. Although these guidelines are in place, studies suggest that it is not uncommon that providers are still using the blanket statement "NPO after midnight" without regard to patient characteristics, the procedure, or the time of the procedure [5] .

There are several Cochrane systematic reviews around analgesics and the Bandolier homepage [6] provide a composite around the **management of acute pain**.

The group around Professor Henrik Kehlet has initiated the home page procedure specific pain management where the evidence around pain management for typical procedures is systematically reviewed. On the basis of a critical analysis of available studies procedure specific pain management strategies [7] are provided.

There are also explicit guidelines for the **management of postoperative nausea and vomiting** provided by SAMBA published in 2007; *Society for Ambulatory Anesthesia Guidelines for the Management of Postoperative Nausea and Vomiting* [8].

The guidelines, **guidance paper around anti-platelet agents and anti coagulants** are a couple of years old and one may argue

if it is entirely up to date [9]. It suggests that low dose aspirin should be discontinued for up to seven days prior to surgery; *Aspirin works by irreversibly inhibiting platelet cyclooxygenase. The circulating platelet pool is replaced every 7 to 10 days, so aspirin therapy should be discontinued 7 to 10 days before surgery*. A more recent review published in Anesthesia & Analgesia 2011 [10] suggest a more liberal approach suggesting avoiding stopping the administration of anti-platelet drugs; *Management of patients who are receiving antiplatelet drugs during the perioperative period requires an understanding of the underlying pathology and rationale for their administration, pharmacology and pharmacokinetics, and drug interactions. Furthermore, the risk and benefit assessment of discontinuing or continuing these drugs should be made bearing in mind the proposed surgery and its inherent risk for bleeding complications as well as decisions relating to appropriate use of general or some form of regional anesthesia. In general, the safest approach to prevent thrombosis seems to be continuation of these drugs throughout the perioperative period except where concerns about perioperative bleeding outweigh those associated with the development of thrombotic occlusion*.

The Society for Ambulatory Anaesthesia SAMBA has an active and informative webpage [11]. SAMBA also provide a link to the SAMBA clinical outcome register SCOR [12]. There are also comprehensive standard operating procedure guidelines issued by national societies such as the Australian and New Zeeland college of anaesthetists. These national guidelines may not only provide scientific advice but sets the national standard to which facilities and practices are audited against [13,14]. Also the British Association for Day Surgery provide a series of useful papers on their website [15]. A most useful simple PONV calculator is available on line .

Guidelines are however not absolute but needs to be put into perspective. They need to be seen as support but needs also to be handled and implemented on the basis of analysis. There has recently been an opposition against the guideline produced by the European Society for Anaesthesiology around propofol sedation by non-anaesthesiologists [17,18]. These guideline was based on evidence, expert opinion and was produced to high methodological standards [19]. The diverse positions among ESA members reflect the different medical practices, reimbursement policies and political leanings within individual countries. In an accompanying editorial Werner et al state; "However, whatever your view, one fact is clear. It is however of importance to acknowledge that guideline, as the name implies, offers guidance and is not composed of fast and hard rules. Within its text appears the following note: [the guideline is] 'not designed to be rigid and cannot replace clinical judgment; furthermore, the implementation may be subject to domestic regulations or local policy and should only be used with the agreement of the relevant domestic regulatory authority or local policy maker'". Thus, although we can expect that this guideline will improve patient safety in countries where non-anaesthesiologists administer sedation and analgesia, countries with anaesthesiologist-based sedation systems are not obliged to surrender their current high level of care and adopt the administration of propofol by non-anaesthesiologists [20].

The continuously expanding body of information is hard to follow. It should also be acknowledged that the information today is available in numerous presentations. There are numerous websites and alerts providing news on a regular basis. It is also easy to set up a dedicated personal search from for instance PubMed. The International Association for Ambulatory Surgery is one webpage [21] trying to provide updated links to different best practice recommendations and other guidelines for the management of patients undergoing ambulatory surgery.

References

1. De Hert S, Imberger G, Carlisle J, Diemunsch P, Fritsch G, Moppett I, Solca M, Staender S, Wappler F, Smith A; Task Force on Preoperative Evaluation of the Adult Noncardiac Surgery Patient of the European Society of Anaesthesiology. Preoperative evaluation of the adult patient undergoing non-cardiac surgery: guidelines from the European Society of Anaesthesiology. ***Eur J Anaesthesiol***. 2011; **28**:684–722.
2. Joshi GP, Chung F, Vann MA, Ahmad S, Gan TJ, Goulson DT, Merrill DG, Twersky R; Society for Ambulatory Anesthesia. Society for Ambulatory Anesthesia consensus statement on perioperative blood glucose management in diabetic patients undergoing ambulatory surgery. ***Anesth Analg.*** 2010;**111**:1378–87.
3. Smith I, Kranke P, Murat I, Smith A, O'Sullivan G, Søreide E, Spies C, in't Veld B; European Society of Anaesthesiology. Perioperative fasting in adults and children: guidelines from the European Society of Anaesthesiology. ***Eur J Anaesthesiol.*** 2011;**28**: 556–69.
4. Breuer JP, Bosse G, Prochnow L, Seifert S, Langelotz C, Wassilew G, Francois-Kettner H, Polze N, Spies C. Reduced preoperative fasting periods. Current status after a survey of patients and colleagues. ***Anaesthesist.*** 2010;**59**: 607–13.
5. Anderson M, Comrie R. Adopting preoperative fasting guidelines. ***AORN J.*** 2009; **90**:73–80.
6. http://www.medicine.ox.ac.uk/bandolier/booth/painpag/acute.html
7. http://www.postoppain.org/frameset.htm
8. Joshi GP, Chung F, Vann MA, Ahmad S, Gan TJ, Goulson DT, Merrill DG, Twersky R; Society for Ambulatory Anesthesia. Society for Ambulatory Anesthesia consensus statement on perioperative blood glucose management in diabetic patients undergoing ambulatory surgery. ***Anesth Analg.*** 2010;**111**: 1378–87.
9. Douketis JD, Berger PB, Dunn AS, Jaffer AK, Spyropoulos AC, Becker RC, Ansell J; American College of Chest Physicians. The perioperative management of antithrombotic therapy: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). ***Chest.*** 2008;**133(6 Suppl)**: 299S–339S.
10. Hall R, Mazer CD. Antiplatelet drugs: a review of their pharmacology and management in the perioperative period. ***Anesth Analg.*** 2011;**112**: 292–318.
11. http://www.sambahq.org/
12. http://www.sambahq.org/index.
13. http://www.anzca.edu.au/resources/professional-documents/documents/professional-standards/professional-standards-15.html
14. http://www.anzca.edu.au/resources/professional-documents/documents/professional-standards/pdf-files/PS9-2010.pdf
15. http://www.bads.co.uk/bads/joomla/
16. http://www.daysurgeryuk.net/bads/joomla/files/Downloads/PONVrisk.htm
17. Dumonceau JM, Riphaus A, Aparicio JR, Beilenhoff U, Knape JT, Ortmann M, Paspatis G, Ponsioen CY, Racz I, Schreiber F, Vilmann P, Wehrmann T, Wientjes C, Walder B; NAAP Task Force Members. European Society of Gastrointestinal Endoscopy, European Society of Gastroenterology and Endoscopy Nurses and Associates, and the European Society of Anaesthesiology Guideline: Non-anaesthesiologist administration of propofol for GI endoscopy. ***Eur J Anaesthesiol.*** 2010;**27**: 1016–30.
18. Perel A.Consensus Statement of 21 European National Societies of Anaesthesia. ***Eur J Anaesthesiol.*** 2011;**28**: 580–4.
19. AGREE Collaboration. Development and validation of an international appraisal instrument for assessing the quality of clinical practice guidelines: the AGREE project. ***Qual Saf Healthcare*** 2003; **12**:18–23.
20. Werner C, Smith A, Van Aken H. Guidelines on non-anaesthesiologist administration of propofol for gastrointestinal endoscopy: a double-edged sword. ***Eur J Anaesthesiol.*** 2011; **28**: 553-5.
21. http://www.iaas-med.com/joomla/index.php